

KHAYDAROV, R.S.

Introducing into cultivation *Megacarpaea gigantea* Rgl.  
Biul.Glav.bot.sada no.58:96-99 '65.

(MIRA 18:12)

1. Botanicheskiy sad Samarkandskogo gosudarstvennogo  
universiteta imeni Alishera Navoi.

L 41319.66 EWT(m)/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP6019605 (A, N) SOURCE CODE: UR/0048/66/030/002/0194/0197

AUTHOR: Berlovich, E.Ye.; Golovin, V.V.; Polyakov, A.G.; Khodzhayev, M.; Khaydarov, T.

ORG: none

TITLE: Lifetime of the first excited state of <sup>149</sup>Sm /Report, Fifteenth Annual Conference on Nuclear Spectroscopy and Nuclear Structure, held at Minsk, 25 Jan. to 2 Feb. 1965/

SOURCE: AN SSSR, Izvestiya. Seriya fizicheskaya, v. 30, no. 2, 1966, 194-197

TOPIC TAGS: nuclear spectroscopy, nuclear structure, excited state, half life, gamma ray, conversion electron, phonon, samarium

ABSTRACT: The authors have measured the lifetime of the 22.5 keV first excited state of <sup>149</sup>Sm. The source was obtained by bombarding terbium with 680 MeV protons for 5 hours and separating the europium fraction 5 months later. <sup>149</sup>Eu decays by electron capture to <sup>149</sup>Sm. Delayed coincidences were recorded between the gamma rays from the 328 keV transition to the 22.5 keV level and conversion electrons from the decay of that level. The gamma rays were detected with an NaI crystal scintillator, and the conversion electrons, with a thin (0.5 mm) plate of anthracene. The half-life of the 22.5 keV level was found to be  $(6.9 \pm 0.5) \times 10^{-9}$  sec, in agreement with the finding of O.C.Kistner, A.C.Li, and S.Monaro (Phys. Rev., 132, 1733 (1963)) and in disagreement with that of R.Leonard, S.Iha, and G.Lang (Bull.Amer.Phys.Soc., Ser.II, 8, No.1,

CdPd 1/2

L 41319-66

ACC NR: AP6019605

85 (1963)). The nature of the low-lying levels of  $\text{Sm}^{149}$  is discussed. The authors favor the description given by the phonon model of L.S.Kislinger and R.A.Sorensen (Rev.Mod.Phys., 35, 853 (1963)), although that model predicts much too high a value for the quadrupole moment of the  $\text{Sm}^{149}$  ground state. From the reduced transition probabilities from the ground state to the different excited states, measured in the present work and by D.G.Alkhazov, K.I.Yerokhina, and I.Kh.Lemberg (Izv. AN SSSR, Ser. fiz., 27, 1363 (1963)), the root-mean-square deformation of  $\text{Sm}^{149}$  was calculated and found to be 0.13. That value coincides with the corresponding value for the even-even  $\text{Sm}^{148}$  core (derived from the reduced probability for the  $0^+ \rightarrow 2^+$  transition) and confirms the phonon nature of the low-lying  $\text{Sm}^{149}$  levels. Orig. art. has: 1 formula and 2 figures.

SUB CODE: 20

SUBM DATE: 00

ORIG. REF: 008

OTH REF: 013

Card 2/2



"APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000721920004-6

APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000721920004-6"

BEGANOV, R.B.; GLADYSHEV, D.A.; STARODUBTSEV, S.V.; KHAYDAROV, T.

Measurement of total neutron cross sections of In and Sm. Izv.  
AN Uz.SSR.Ser.fiz.-mat.nauk 8 no.4:32-36 '64.

(MIRA 18:3)

1. Institut yadernoy fiziki AN UzSSR.

ACCESSION NR: AP4041452

S/0089/64/016/006/0523/0524

AUTHORS: Begzhanov, R. B.; Gladyshev, D. A.; Starodubtsev, S. V.;  
Khaydarov, T.

TITLE: Cross section for the interaction between neutrons and Sm-149  
and In-115 nuclei

SOURCE: Atomnaya energiya, v. 16, no. 6, 1964, 523-524

TOPIC TAGS: neutron interaction, neutron spectroscopy, indium,  
samarium, resonance scattering

ABSTRACT: The total effective cross sections were measured with the  
neutron spectroscope previously described (Atomnaya energiya v. 14,  
no. 5, 1963, Izv. AN UzSSR. Ser. fiz. matem., nauk, no. 3, 1963)  
at a channel width of 8  $\mu$ sec and resolution 2.23 and 2.5  $\mu$ sec/m in  
the case of indium and samarium, respectively. The resonance para-  
meters were calculated by a method described by G. I. Marchuk

Card 1/4

ACCESSION NR: AP4041452

(Teoriya i metody\* rascheta yaderny'kh reaktorov [Theory and Design Methods of Nuclear Reactors], Gosatomizdat, 1962, p. 240). Some factors affecting the accuracy of the results are mentioned. Orig. art. has: 2 figures, 3 formulas, and 1 table.

ASSOCIATION: None

SUBMITTED: 19Sep63

REF NO:

ENCL: 02

SUB CODE: EP

NR REF SOV: 004

OTHER: 000

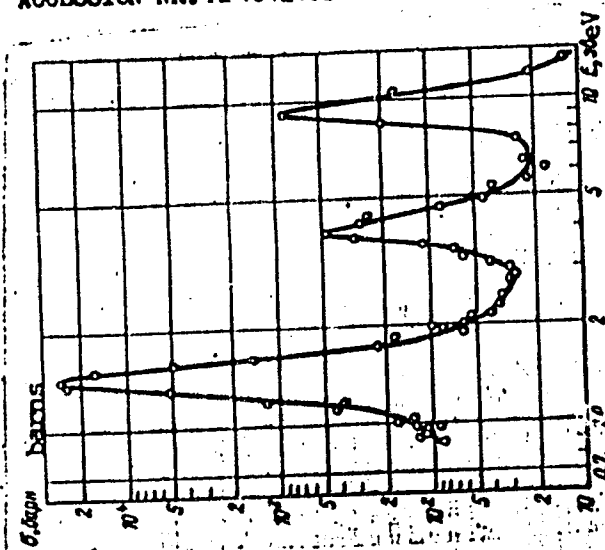
Card 2/4



ACCESSION NR: AP4041452

ENCLOSURE: 01

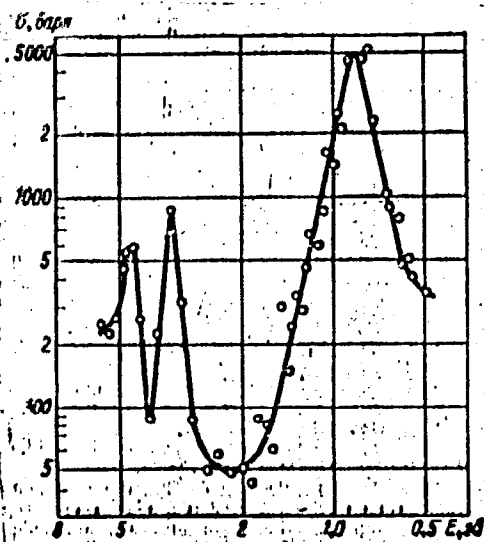
Total neutron cross  
section of  $\text{In}^{115}$



Card 3/4

ACCESSION NR: AP4041452

ENCLOSURE: 02



Total neutron cross section  
of  $\text{Sm}^{149}$

Card 4/4

KHAYDAROVA, G.Ya., kand. sel'skokhoz. nauk; STAROVA, N.P., inzh.

Saturation irrigation in long-furrow irrigation. Gidr. i mel.  
17 no.6:12-17 Jo '65. (MIRA 18:7)

1. Engel'skaya opytno-meliorativnaya stantsiya.

KHAYDAROVA, R.N.

Geography of cotton growing in the Tajik S.S.R. Sbor. trud. Tadzh.  
fil. Geog. ob-va SSSR no.2:113-124 '61. (MIRA 14:11)  
(Tajikistan--Cotton growing)

KHAYDAROVA, S.

Cand Phys-Math Sci - (diss) "Theory of the phenomena of heat and electricity transfer in semiconductors." Tashkent, 1961. 20 pp; (Academy of Sciences Uzbek SSR, Physics-Technology Inst, Division of Theoretical Physics); 170 copies; price not given; (KL, 6-61 sup, 196)

KOTOV, Yu.; MAYBORODA, O.; POLYAKOV, S.; KHAYDUKOV, F.

The "Junior" racing automobile. Za rul. 18 no.5:16a-16d My '60.  
(MIRA 14:3)

(Automobiles, Racing)

18

CA

PROCESSING AND PREPARATION

Catalytic properties of hafnium and zirconium oxides  
 S. B. Anisimov and G. I. Khaidarov. *Zhur. Obshch. Khim.* (J. Gen. Chem.) 18, 40-2 (1948) (in Russian). — Catalysts of pure  $\text{HfO}_2$  and  $\text{ZrO}_2$  were tested with 95.5%  $\text{EtOH}$  flowing at 80 ml./hr., between 285 and 555°, in  $\text{N}_2$ . The  $\text{Hf}$  catalyst was prepd. by fusing 99.5% pure  $\text{HfO}_2$  with a 4-fold excess of  $\text{Na}_2\text{CO}_3$  at 800°, dissolving in  $\text{H}_2\text{SO}_4$ , pptg.  $\text{Fe}$  with  $\text{NH}_4\text{CNS}$  + ether, pptg.  $\text{Hf}(\text{OH})_3$  with  $\text{NH}_4\text{OH}$ , washing to remove all  $\text{CNS}^-$  and drying 5 hrs. at 180°; the  $\text{ZrO}_2$  catalyst was prepd. in a similar way. Both catalysts cause both dehydration and dehydrogenation of  $\text{EtOH}$  and their activities are almost identical. The activity of the same batch of catalyst falls rapidly in consecutive runs. Example of data (vol. of gas +  $\text{H}_2$  (ml.), compn. of gas, in %  $\text{CO}_2$ ,  $\text{C}_2\text{H}_4$ ,  $\text{CO}$ ,  $\text{H}_2$ ,  $\text{CH}_4$ ,  $\text{N}_2$ ): dehydration, % dehydrogenation:  $\text{ZrO}_2$  at 280°, 2500; 2.0, 2.2, 7.8, 14.0, 8.0, 64.6; 1.7, 1.6; at 505°, 5000; 6.0, 24.0, 2.8, 54.0, 3.8, 9.8; 30.5, 3.8; new batch at 455°, 12,500; 5.5, 24.0, 6.0, 49.3, 3.5, 12.0; 50.0, 7.2.  $\text{HfO}_2$  at 350°, 2500; 1.4, 0, 3.2, 8.0, —, 87.4; 0.0, 2.4; at 430° (200); 1.8, 10.4, 3.2, 37.2, 2.4, 45.0; 8.9, 4.7; at 555°, 10,000; 0.4, 22.4, 3.2, 55.0, —, 19.0; 38.0, 7.2. Firing at above 500° (8 hrs. in air) destroys almost completely the catalytic properties of both  $\text{ZrO}_2$  and  $\text{HfO}_2$ . N. T.

ASR-51A METALLURGICAL LITERATURE CLASSIFICATION

SECTION	SUBSECTION	SECTION	SUBSECTION
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100	100	100	100

KHAYDAROV, G. Z. -

KHAYDAROV, G. Z. - "On changes in the isotope composition of radio active elements in situ during the process of migration". Alma-Ata, 1955. Published by the Kazakh State U. Min Higher Education USSR. Kazakh State U imeni S. M. Kirov. (Dissertation for the Degree of Candidate of Physicomathematical Sciences.)

SO: Knizhnaya Letaopis' No. 46, 12 November 1955. Moscow



KHAYDAROV, KADYRZHAN

KHAYDAROV, KADYRZHAN, rezchik po derevu (Kokand, Uzbekskaya SSR)

Lenin's thanks. Prom.koop. no.11:6-7 N '57.  
(Kenin, Vladimir Il'ich, 1870-1924)

(MIRA 10:12)

KHAYDAROV, R.S., student V kursa.

Weeds of the tumbleweed type. Sbor.stud.rab.Uz.GU no.2:102-106  
'59. (MIRA 13:11)

1. Kafedra obshchey botaniki i darvinizma Uzbekskogo gosudarst-  
vennogo universiteta.  
(Russian thistle)

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ref. "Yu. G. Gafarov. ...  
... 2 figures and 1 table.

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NO REF SOV: 004 OTHER: 003

Dissertation: "Characteristics of the Action of a Combination of streptomycin and Tibon in Tuberculosis." Cand Med Sci, Acad Med Sci USSR, 12 May 54.  
Vechernyaya Moskva, Moscow, 3 May 54.

SO: JUM 2-4, 26 Nov 1954

KHAYDAROVA, R. N.

"Development and Disposition of Cotton Growing in Tadzhik SSR." Cand  
Geog Sci, Azerbaydzhan State U imeni S. M. Kirov, Min Higher Education  
USSR, Baku, 1955. (KL, No 15, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations  
Defended at USSR Higher Educational Institutions (16).

UMAROV, S.U., akademik; KHAYDAROVA, S.

On the theory of heat transfer and electricity in semiconductors.  
Dokl. AN Uz. SSR no.10:11-16 '57. (MIRA 11:5)

1. Fiziko-tekhnicheskii institut AN UzSSR, 2. AN UzSSR (for Umarov).  
(Semiconductors)

KHAYDENVAG, P., inzh.

Construction equipment at the Leipzig Fair. Prom. stroi. 40  
no.7:56 J1 '63. (MIRA 16:10)



KHAYDU, I., dotsent

Graphoanalytic analysis of compressed rods for longitudinal bending.  
Rasch.na prochn. no.8:253-256 '62. (MIRA 15:8)  
(Elastic rods and wires)

S/079/62/032/010/008/008  
D214/D307

AUTHORS: Andrianov, K.A., Khayduk, Ionel, Khananashvili, L.M.,  
and Nekhayeva, N.I.

TITLE: The synthesis of dimethylcyclosilthioxanes

PERIODICAL: Zhurnal obshchey khimii, v. 32, no. 10, 1962, 3447

TEXT: A description of the synthesis of two examples of a hitherto unknown class of compounds: cyclosilthioxanes. The treatment of 1,3-dichlorotetramethyldisiloxane with  $H_2S$  in the presence of pyridine gave a crystalline compound (b. range  $116-122^\circ C/2$  mm Hg; m.p.  $38-42^\circ C$ ). From the quantitative analysis of this compound and from ir, which showed the presence of Si-O-Si, Si-S-Si and Si-CH<sub>3</sub> bonds, the structure was found to be  $(CH_3)_2SiO[Si(CH_3)_2S]_2Si(CH_3)_2O$ . Under similar conditions 1,5-dichloro-hexamethyltrisiloxane gave a colorless, transparent liquid (b. range  $170-172.5^\circ C$ ) the structure of which was shown to be  $(CH_3)_2SiOSi(CH_3)_2SSi(CH_3)_2O$ .  
Card 1/2

1. *Chemical synthesis of polymers*

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ACCESSION NR: AP4022962

S/0079/64/034/003/0912/0914

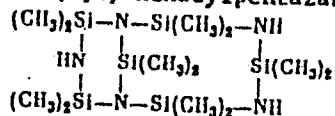
AUTHOR: Andrianov, K. A.; Khayduk, Ionel; Khananashvili, L. M.

TITLE: The formation of polycyclosilazanes during ammonolysis of dimethyldichlorosilane

SOURCE: Zhurnal obshchey khimii, v. 34, no. 3, 1964, 912-914

TOPIC TAGS: polycyclosilazane, ammonolysis, dimethyldichlorosilane, dodecane methylbicyclo 3,4 hexacyclopentazane, diaminosilazane

ABSTRACT: Dodecane methylbicyclo (3,4) hexacyclopentazane and the polymer

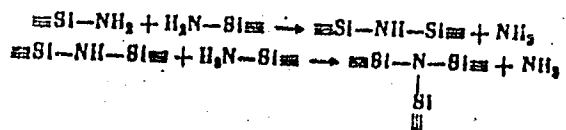


together with hexamethylcyclotrisilazane and octamethylcyclotetrasilazane were obtained while carrying out the reaction of dimethyldichlorosilane with ammonia in benzene solution at a temperature not exceeding 30 C. A study of this reaction indicated that the composition of ammonolysis products depends on the operating

Card 1/4

ACCESSION NR: AP4022962

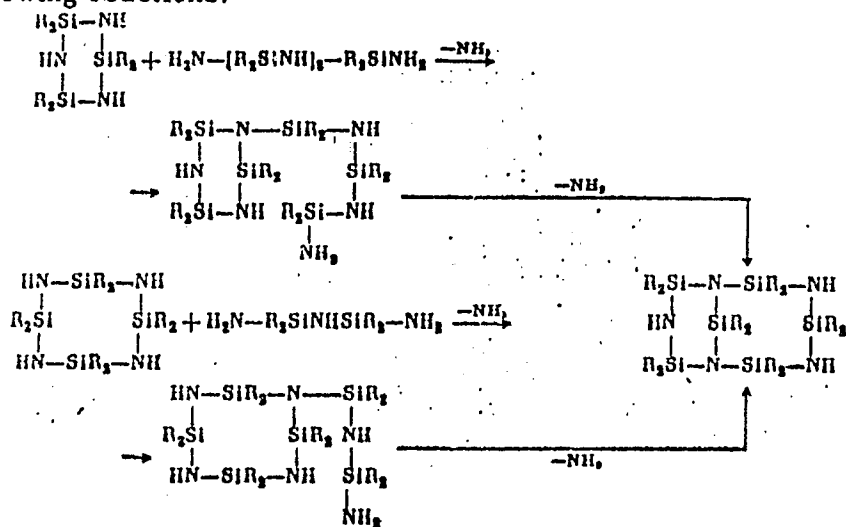
conditions of the synthesis. If the reaction is carried out with subsequent heating of products and no separation of ammonium chloride, a bicyclic compound with low yield forms. If the product of ammonolysis is heated after separation of ammonium chloride, the yield of the bicyclic compound and the polymer increases significantly. It is interesting to note that ammonia separation is observed in the process of heating the product of the dimethyldichlorosilane ammonolysis reaction. While the gaseous ammonia takes effect on the dimethyldichlorosilane, the reaction occurs not only with monocyclic compounds forming, but also with linear diaminosilazanes  $H_2N-(R_2SiNH)_n-R_2Si-NH_2$ . The latter are much more likely to form in conditions of low temperature ammonolysis. This confirms the fact that during heating of products of ammonolysis, ammonia is always separated. This can develop only as a result of condensation of the amino groups in the silicon atoms or as a result of transamination:



Card 2/4

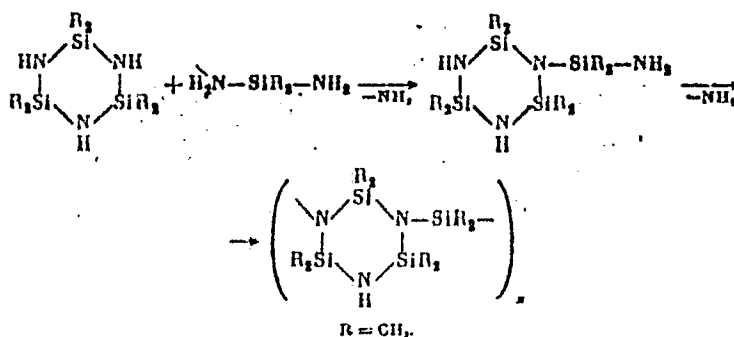
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Consequently, the formation of a bicyclic compound and of polymers obtained during the reaction of dimethyldichlorosilane with ammonia may be explained by the following reactions:



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ACCESSION NR: AP4022962



The composition of the polymer being formed does not correspond to the product of simple ammonolysis  $[\text{R}_2\text{SiNH}]_x$  as might be expected. Its composition  $[\text{R}_2\text{Si}_2\text{N}_3\text{H}]_x$  indicates that it is a product of conversion which occurs in the second stage of the reaction. Orig. art. has: 00

ASSOCIATION: Moskovskiy Institut tonkoy khimicheskoy tekhnologii imeni M. V. Lomonosova (Moscow Institute of Fine Chemical Technology)

SUBMITTED: 04Jan63

DATE ACQ: 18Apr64

ENCL: 00

SUB CODE: GC

NO REF SOV: 001

OTHER: 002

Card 4/4



ANDRIANOV, K.A.; KHAYDUK, Ionel; KHANANASHVILI, L.M.; NEKHAYEVA, N.I.

Synthesis of dimethylcyclosilthioxane. Zhur.ob.khim.  
32 no.10:3447 0 '62. (MIRA 15:11)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii  
imeni M.V. Lomonosova.  
(Silicon organic compounds)  
(Oxathiane)

KHAYDUK, Ionel; ANDRIANOV, K.A.

Nomenclature of silicon-containing inorganic heterocycles. Izv.  
AN SSSR. Ser.khim. no.9:1537-1544 S '63. (MIRA 16:9)

1. Institut tonkoy khimicheskoy tekhnologii im. M.V.Lomonosova.  
(Silicon compounds—Nomenclature)

ANDRIANOV, K.A.; KHAYDUK, IoneI; KHANANASHVILI, L.M.

New eight-membered cyclosilazoxanes. Izv. AN SSSR. Ser.khim.  
no.9:1701-1702 S '63. (MIRA 16:9)

1. Institut tonkoy khimicheskoy tekhnologii im. M.V.Lomonosova.  
(Silicon organic compounds)

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ANDRIANOV, K.A.; KHAYDUK, Ionel; KHANANASHVILI, L.M.

Formation of polycyclosilazanes in the ammonolysis of  
dimethyldichlorosilane. Zhur. ob. khim. 34 no. 3:912-914  
Mr '64. (MIRA 17:6)

L. Moskovskiy Institut tonkoy khimicheskoy tekhnologii imeni  
M.V. Lomonosova.

RECEIVED MAY 1963

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101  
6/5

SOURCE: Zhurnal obshchey khimii, v. 33, no. 8, 1963, 2790-2791

TOPIC TAGS: heterocyclic compounds, inorganic heterocyclic compounds, trisildiaxanes, 3,5-diaza-1-oxacyclohexasilane, trisildiaxane synthesis, synthesis, ammonolysis, dichlorotetra-  
methyloxane, dichlorodimethylsilane, 2,4,6-hexamethyl-3,5-



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ACCESSION NR: AP5000299

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THREE 002

AUTHOR: Antonesku, N. (Engineer)  
 Khayduk, K. (Engineer)

SOV/96-58-10-21/25

TITLE: Thermal and Operating characteristics of the Vuya Boiler. (Teplovyie  
 i rabochiye kharakteristiki kotla Vuya)

PERIODICAL: Teploenergetika, 1958, No.10. pp. 83-85 (USSR)

ABSTRACT: Fifty years ago the Roumanian scientist Trayan Vuya proposed to use  
 for aeroplanes a compact direct-flow boiler combined with a high-  
 pressure turbine. He also suggested a burner in the form of a metal  
 tube of alloy steel, in which the volumetric stress would be 1000  
 times greater than in the burner of ordinary boilers, the gas velocity  
 being 100 m/sec more. He built a 200 kg/hour boiler in 1932. A  
 Vuya boiler is sketched in Fig.1. and briefly described. After  
 leaving the furnace, the combustion products pass through four  
 successive concentric chambers separated by barriers. The steam and  
 water duct consists of a number of tubes in parallel; there is  
 usually one tube for each 100 tons/hour of steam. The boiler is  
 ignited electrically and steams within a few minutes. A 100 kg/hour  
 specimen was built in the Power Institute for experimental purposes;  
 the leading data are given in Table.1. It operates at 40 atm and  
 400°C. The temperature distribution of combustion products is  
 plotted in Fig.2. and the heat distribution between chambers in  
 Fig.3; other characteristics of the boiler are stated. The

Card 1/2

Thermal and operating characteristics of the Vuya Boiler. SOV/96-58-10-21/25

resistance to gas flow is high, but the boiler has the advantages of small size and rapid starting. It is recommended for use in transport for heating, for thermotechnical laboratories, and other purposes. The Institute is now designing other variants of the boiler in order to extend its utility. There are 7 figures and 3 tables.

ASSOCIATION: Roumanian Peoples Republic (Rumynskaya Narodnaya Respublika)

Card 2/2

ACCESSION NR: AP4037631

S/0096/64/000/006/0007/0010

AUTHOR: Margulova, T. Kh. (Doctor of technical sciences); Sterman, L. S. (Doctor of technical sciences); Khayduk, K. (Engineer)

TITLE: Combined atomic power plants and their thermal efficiency indices

SOURCE: Teploenergetika, no. 6, 1964, 7-10

TOPIC TAGS: atomic power plant; atomic reactor, combined atomic power plant, reactor efficiency, reactor operation

ABSTRACT: Great interest is being shown in the higher efficiency of combined atomic power plants operating on both organic and nuclear fuels. The construction of many new plants is anticipated within the next decade. The thermal unit of the combined plant makes it possible to superheat the steam from the nuclear unit. Superheating of steam generated in both the thermal and nuclear units can be accomplished in the convective gas conduits of the boiler unit. Thus, superheaters can be made of ordinary steels, and the operating conditions would be the same as in ordinary boilers. Two thermal schemes for a combined plant are presented in which thermal and nuclear units operate at 1) the same pressure and 2) at different pressures. In each case, there is a considerable increase in the thermal

Card 1/2

ANDROANOV, K.A.; KHAYDUK, Y.; KHAMBAASVILI, I.M.

Ease of the elements of forming polymers with inorganic chains  
of molecules. Usp. khim. 34 no.1327-43 Ja '65.

(MIRA 12:4)

I. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni  
Lomonosova.

KHAYDUKOV, G. K.

35268. Sbornye zhelezobetonnye elementy dlya perekrytiy grazhdanskikh zdaniy. Trudy IV vsesoyuz. Konf-tsiy po beton i zhelezobeton konstruktsiyam. Ch. I. M.-L., 1949, S. 210-19

SO: Lotopis' Zhurnal'nykh Statey. Vol. 34, 1949 Moskva



CHAYNEV, G. E.

Reinforced Concrete Construction

Selection of types of pre-fabricated reinforced concrete floors of private buildings and peculiarities in planning their elements. Mat. I Konstr. no. 3, 1949

Monthly List of Russian Accessions. Library of Congress, August 1952. UNCLASSIFIED.

YHAYDUKOV, G.

23148 konstruktsiya zhelezobetonnykh rebistykh elementov sbornykh domov  
I izgotovleniye ikh v betonnykh matritsakh. arkhitektura I  
stroit-vo, 1949, No. 4, c. 18-21.

SO: LETOPIS' NO. 31, 1949

KHAYENKOV, G. K.

Zhelezobetonnye konstruktsii, izgotovliayemye v matritsakh / Reinforced concrete construction elements made in matrices /. Mos va, Gos. izd-vo lit-ry po stroitel'stvu i arkhitekture, 1953. 124 p.

SO: Monthly List of Russian Acquisitions, Vol. 7 No. 2 May 1954.

100710000, G.K.

TAMARIN, A.A., kandidat tekhnicheskikh nauk; KHAYDUKOV, G.K., kandidat  
tekhnicheskikh nauk; POLOMEYEV, A.A., inzhener.

Mechanization of preparation, transporting and applying of emulsion-  
oil lubricants. Mekh.stroi. 12 no.3:8-10 Mr '55. (MLRA 8:4)  
(Precast concrete construction--Formwork)

KHAYDUKOV, G.K., kandidat tekhnicheskikh nauk

Construction yard production of precast reinforced concrete products. Gor.khoz. Mosk. 29 no.6:17-22 Je '55. (MIRA 8:8)

1. Nauchno-issledovatel'skiy institut stroitel'noy tekhniki  
Akademii arkhitektury SSSR  
(Precast concrete)

MOSKVIN, V.M., doktor tekhnicheskikh nauk, professor; KHAYDUKOV, G.K.,  
kandidat tekhnicheskikh nauk.

Scientific conference on problems of construction in Poland.  
Bet.i zhel.-bet. no.1:36-38 Ja '56. (MLRA 9:4)  
(Poland--Building--Congresses)

AUTHORS: Khaydukov, G. K. (Cand. Mech.Sc.) SOV/97-53-7-4/10  
Dardik, N. B. (Engineer).

TITLE: Pre-Stressed Reinforced Concrete Thin Floor Panels,  
Their Manufacture on Conveyor Belt by Method of  
Interrupted Moulding in Dies. (Predvaritel'no naprya-  
zhennyye tonkostennyye paneli perekrytiy i ikh izgotov-  
leniye na konveyere sposobom preryvistogo prokata v  
matritsakh).

PERIODICAL: Beton i Zhelezobeton, 1953, Nr.7. pp. 259 - 263. (USSR).

ABSTRACT: The described thin panels of the size of the whole room  
were designed by the Institute for Concrete and Reinforced  
Concrete ASIA, SSSR (Institut betona i zhelezobetona  
ASIA, SSSR), SAKB APU of Mosgorispolkcm and Factory No.6  
of Glavmoszhelezobeton (see Fig.1 and 2). The reinforce-  
ment is of high tensile steel 30 KhG2S. Fig.3 illustrates  
methods of calculation of pre-stressed reinforced box  
slab. Theoretical analysis of this type of slab was  
described by G. K. Khaydukov in the article "Assembly  
of Pre-Stressed Reinforced Concrete Constructions Manu-  
factured by Means of Dies" published in Gosstroyizdat,  
1953. Tests proved that panels the size of the whole  
room could be manufactured much more economically than

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SOV/97-58-7-4/10

Pre-Stressed Reinforced Concrete Thin Floor Panels, Their Manufacture on Conveyor Belt by Method of Interrupted Moulding in Dies.

other types of floor constructions. The constructional height of the slab is 15 cm (Fig.4). Analysis of planning large panel blocks of flats carried out by No.2 Institute of the Ministry of Building of RSFSR (Institut No.2 ministerstva stroitel'stva RSFSR) showed that 4 standardised sizes of "box" slabs are required (Fig.5). Adaptation of conveyor installations of the factory No.6 for the manufacture of the above-mentioned slabs was carried out by M. N. Vakhomskiy, S. S. Davydov, N. B. Dardik, K. N. Kartashov, S. P. Mayorov, A. V. Pochkin, D. M. Rachevskiy, I. P. Stepanov, G. K. Khaydukov and V. A. Shevchenko. The Laboratory NIIMosstroy and the Institute for Concrete and Reinforced Concrete (Institut beton i zhelezobeton) carried out investigations on the best method of curing concrete, and it was found that the time required was four hours. The process of winding of the steel wires is divided into two parts. The winding machine is of the type ENIMS. Pre-stressed reinforcement of the bottom, and especially of the top flange consists of steel Mk. 30KhG2S. Tensioning is carried out by electrically generated heat (see Fig.6A and 6B);

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SOV/97-58-7-4/10

Pre-Stressed Reinforced Concrete Thin Floor Panels, Their Manufacture on Conveyor Belt by Method of Interrupted Moulding in Dies.

the reinforcement is heated up to 300°C. This method of tensioning is also used in Factories No.6 and 12 of the Glavmoszhelezbeton. Fig.7 illustrates technical processes of casting thin ribbed panels by method of interrupted moulding in dies using vibrator. After completion of 4-hour steam curing in hermetically sealed chambers the concrete strength is 200kg/cm<sup>2</sup>. An interesting construction of die was produced by the Factory No.6 of the Institute for Concrete and Reinforced Concrete (Fig.8). There is not yet a satisfactory apparatus for dosing of concrete mix required for thin slabs. The maximum aggregate is 15 mm, and the binding (adhesive) value should be 400 - 450 kg/m<sup>3</sup>. A mix having these properties will also have good casting properties (40-60 seconds). Calculations show that adaptation of conveyor for the production of thin ribbed panels PNV 59-32 by method of interrupted moulding requires only half of the thickness of concrete and half of the quantity of reinforcement in comparison with hollow pre-stressed reinforced concrete slabs NU 59-20. The yearly output could reach 700,000 m<sup>2</sup> of panels. It was advocated to

Card 3/4

SOV/97-58-7-4/10

Pre-Stressed Reinforced Concrete Thin Floor Panels, Their Manufacture  
on Conveyor Belt by Method of Interrupted Moulding in Dies.

commence production of a single floor slab covering room  
area of 24 - 26 m<sup>2</sup>. There are 8 Figures.

1. Reinforced Concrete--Applications
2. Construction materials--Design
3. Belt conveyors--Performance
4. Construction materials--Analysis

Card 4/4

KHAYDUKOV, Georgiy Konstantinovich; KARAMYSHEV, I.A., inzh., nauchnyy red.;  
BORODINA, I.S., red.izd-va; RUDAKOVA, N.I., tekhn.red.

[Designing multistep convex hipped slabs according to limited states] Raschet po predel'nyy sostoianiam stupenchato-vsparuchennykh (shatrovykh) panelei. Moskva, Gos.izd-vo lit-ry po po stroit., arkhitekt. i stroit.mat., 1960. 108 p. (Akademiya stroitel'stva i arkhitektury SSSR. Institut betona i zhelezobetona. Perovo. Nauchnoe soobshchenie, no.7). (MIRA 13:8)  
(Concrete slabs)

KHAYDUKOV, G.K., red.; KARAMYSHEV, I.A., nauchnyy red.; GORYACHEVA, T.V.,  
red. izd-va; GOL'BERG, T.M., tekhn. red.

[Reinforced-concrete elements of residential and public buildings]  
Zhelezobetonnye konstruktsii zhilykh i grazhdanskikh zdaniy;  
sbornik statei. Moskva, Gos. izd-vo lit-ry po stroit., arkhitekt., i  
stroit. materialam, 1961. 78 p. (MIRA 14:9)  
(Reinforced concrete construction)

KHAYDUKOV, G.K., kand. tekhn. nauk; BUDARINA, E.M., red. izd-va; SHERST-  
NEVA, N.V., tekhn. red.

[Experimental study of prestressed stepped convex slabs for ripped roofs] Eksperimental'noe issledovanie predvaritel'no napriazhennykh stupenchato-vsparushennykh (shatrovykh) panelei. Moskva, Gos. izd-vo lit-ry po stroit., arkhitekt. i stroit. materialam. Pt.2. 1961. 109 p.

(MIRA 14:12)

(Concrete slabs)

KHAYDUKOV, G.K., kand.tekhn.nauk; ILLARIONOVA, L.F., inzh.

Manufacure of mesh-reinforced concrete channel elements.  
Mekh. stroi. 18 no.6:9-11 Je '61. (MIRA 14:7)

1. Nauchno-issledovatel'skiy institut betona i zhelezobetona  
Akademii stroitel'stva i arkhitektury SSSR.  
(Reinforced concrete)

*KHAYDUKOV, G.K.*

FRENKEL', I.M., kand. tekhn. nauk; MIRONOV, S.A., doktor tekhn. nauk, prof.; BARANOV, A.T., kand. tekhn. nauk; LUZHEVICH, G.A., kand. tekhn. nauk; MIKHAYLOV, K.V., kand. tekhn. nauk; MULIN, N.M., kand. tekhn. nauk; KHAYDUKOV, G.K., kand. tekhn. nauk; KORNEV, N.A., kand. tekhn. nauk; TESLER, P.A., kand. tekhn. nauk; EERDICHEVSKIY, G.I., kand. tekhn. nauk; VASIL'YEV, A.P., kand. tekhn. nauk; LYUDKOVSKIY, I.G., kand. tekhn. nauk; SVETOV, A.A., kand. tekhn. nauk; CHINENKOV, Yu.V., kand. tekhn. nauk; BELOBROVYY, K., inzh.; KLEVTSOV, V.A., inzh.; DOBROMYSLOV, N.S., arkh.; DESOV, A.Ye., doktor tekhn. nauk, prof.; LITVER, S.L., kand. tekhn. nauk; PISHCHIK, M.A., inzh.; SKLYAR, B.L., inzh.; POPOV, A.P., kand. tekhn. nauk; NEKRASOV, K.D., doktor tekhn. nauk, prof.; MILOVANOV, A.F., kand. tekhn. nauk; TAL', K.E., kand. tekhn. nauk; KALATUROV, B.A., kand. tekhn. nauk; KARTASHOV, K.N., red.; MAKARICHEV, V.V., kand. tekhn. nauk, red.; YAKUSHEV, A.A., inzh., nauchnyy red.; BEGA, B.A., red. izd-va; NAUMOVA, G.D., tekhn. red.

[Reinforced concrete products; present state and prospects for development] Zhelezobetonnye konstruktsii; sostoyanie i perspektivy razvitiia. Pod obshchei red. K.N.Kartashova i V.V.Makaricheva. Moskva, Gosstroizdat, 1962. 279 p.

(MIRA 15:8)

(Continued on next card)

FRENKEL', I.M.---(continued) Card 2.

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut betona i zhelezobetona, Perovo. 2. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR (for Kartashov). 3. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR (for Mironov). 4. Gosudarstvennyy institut tipovogo proyektirovaniya i tekhnicheskikh issledovaniy (for Bordichevskiy, Vasil'yev, Lyudkovskiy, Svetov, Chinenkov, Belobrovyy, Klevtsov, Dobromyslov). 4. Vsesoyuznyy gosudarstvennyy proyektno-konstruktorskiy institut (for Desov, Litver, Pishchik).

(Precast concrete)



KHAYDUKOV, G.K., kand.tekhn.nauk

Important problems of the development of thin-walled three-dimensional reinforced concrete elements. Izv.ASIA 4 no.4: 50-58 '62. (Roofing, Concrete) (MIRA 16:1)

KHAYDUKOV, G.K., kand.tekhn.nauk; YERMAKOV, A.K., inzh.

Study of and calculations for beam-walls with openings  
according to the limiting equilibrium method. Bet. 1  
zhel.-bet. 8 no.8:371-377 Ag '62. (MIRA 15:9)  
(Concrete walls—Testing)

KHAYDUKOV, G.K., kand.tekhn.nauk; CHINENKOV, Yu.V., kand.tekhn.nauk

Precast reinforced concrete three-dimensional roofs abroad. Prom.  
stroil. 40 no.2:52-56 '62. (MIRA 15:7)  
(Roofing, Concrete) (Precast concrete construction)

KHAYDUKOV, G.K., kand. tekhn.nauk, red.; ZUBKOVA, M.S., red.izd-va;  
KORDEKOVA, N.I., tekhn. red.

[Mesh-reinforced concrete elements in residential, industrial, and rural construction] Armotsementnye konstruktsii v zhi-lishchnom, promyshlennom i sel'skokhoziaistvennom stroitel'stve. Moskva, Gosstroizdat, 1963. 245 p. (MIRA 16:8)

1. Akademiya stroitel'stva i arkhitektury SSSR. Nauchno-issledovatel'skiy institut betona i zhelezobetona.  
(Reinforced concrete construction)

ACC NR: AP6020120

SOURCE CODE: UR/0027/66/000/001/0042/0047

AUTHOR: Khaydukov, G. K. (Doctor of technical sciences; Professor); Iskhakov, Ya. Sh. (Engineer)

ORG: none

TITLE: Model investigation and calculation of smooth rectangular shells of positive gaussian curvature for equilibrium limit

SOURCE: Beton i zhelezobeton, no. 1, 1966, 42-47

TOPIC TAGS: shell structure, test model, shell deformation, mechanical fracture, construction material

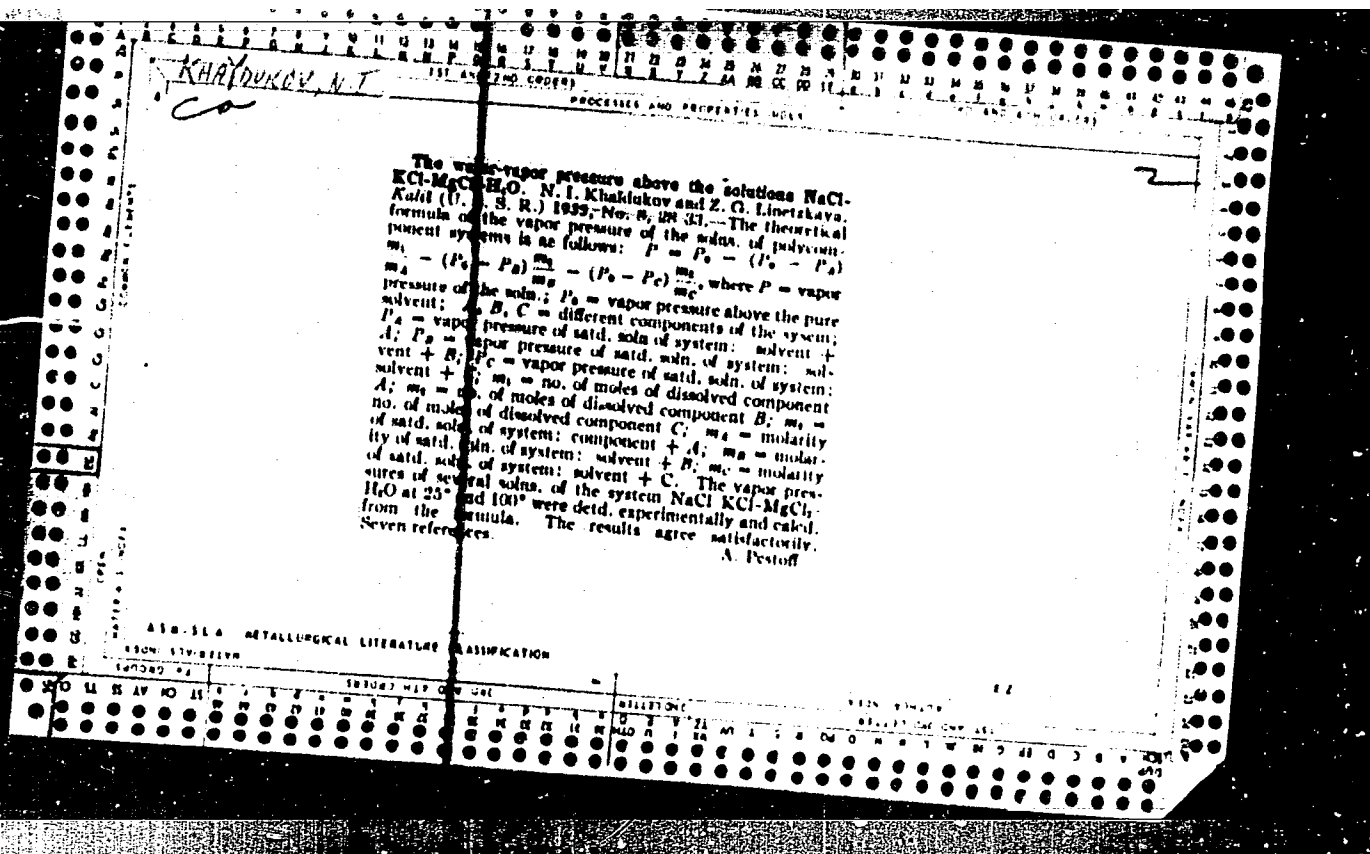
ABSTRACT: 1/6 natural size models plus samples of proposed construction materials to be used in building a gaussian-curvature roof shell were tested, in two main variants. One in which the shell could be load-deformed, another in which steel bracing prevented this. The investigations demonstrated that the smooth shells of positive gaussian curvature with contour rectangularly deformed in plan were  $l_1:l_2=1:2.5-1:8$ , a fracture pattern in the form of concentric ellipses, within which the sheet loses its initial elevation and tends to change form, is possible. The limiting load for the elliptical pattern can be found from the conditions of limiting equilibrium on the basis of the deformation state of the shell. The load-bearing capacity of the

Card 1/2

UDC: 624.274.4.04

SUB CODE: 20, 13 / SUBM DATE: none / ORIG REF: 006

Card 2/2 15



Hydrofluoric acid. T. D. Averbukh and N. I. Khady-  
kov. Russ. 45,500, Jan. 31, 1936. Fluorapar 2 treated  
with  $H_2SO_4$  in a rotating kiln heated by flue gases.

KAHODUKOV, N. I.

2

The vapor pressure of hydrogen fluoride, silicon tetrafluoride and water over the system hydrofluoric acid-fluosilicic acid-sulfuric acid-water. N. I. Khasidukov, Z. G. Lisetskaya and A. Bogdanov. *J. Appl. Chem.* (U. S. S. R.) 9, 439-45 (in French 1956) (1956). The partial pressures of HF and H<sub>2</sub>O over solns. of HF and of HF, SiF<sub>4</sub> and H<sub>2</sub>O over HF-H<sub>2</sub>SO<sub>4</sub>-H<sub>2</sub>O are given at 25°, 40°, 50°, 60° and 75°. In the presence of HF, the vapor pressure of SiF<sub>4</sub> falls. Some of the data of Frederhagen and Wellmann (*C. A.* 27, 890) are inaccurate because they passed gas too rapidly over their solns.

H. M. Leicester

AS & SLA METALLURGICAL LITERATURE CLASSIFICATION



KHAYDUKOV, N.I.; MIROLYUBOV, R.V.

Chromium oxide. Patent U.S.S.R. 77,019, Dec. 31, 1949.  
(CA 47 no.20:10818 '53)

*Khaydukova, R.I.*

AUTHORS: Gorelov, P.N. and Khaydukova, R.I.

68-12-15/25

TITLE: On Vapour-liquid Phase Equilibrium in the System Phenol-  
Phenolate-Alkali-Water (O fazovom ravnovesii par -  
zhidkost' v sisteme fenol - fenolyat - shcheloch' - voda)

PERIODICAL: Koks i Khimiya, 1957, No.12, pp. 40 - 41 (USSR).

ABSTRACT: Experimental data on the equilibrium in the above system,  
necessary for designing apparatus for dephenolising effluent  
water by the vapour circulation method, are given. The  
apparatus and the method used for the determination are des-  
cribed. There are 3 tables and 1 Slavic reference.

ASSOCIATION: VUKhIN

AVAILABLE: Library of Congress  
Card 1/1

KHAYDUKOVA, Z.

Teach the future cooks good practices. Obshchestv. pit. no.3:  
15-16 Mr '63. (MIRA 16:6)

1. Zaveduyushchaya proizvodstvennym obucheniyem Moskovskoy  
shkoly kulinarnogo uchenichestva.  
(Cooking schools)

MOROZOV, A.; GOLUBEV, S., kand.tekhn.nauk; KUGUSHEV, I., inzh.;  
KHAYDUROV, I., inzh.

Standardized farm buildings made of mesh-reinforced concrete  
elements. Na stroi. Ros. no.11:32-34 N '61. (MIRA 16:7)

1. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR  
(for Morozov).  
(Farm buildings) (Precast concrete construction)

KHAYDUROV, Ye., master sporta.

Muzzle brake for pistols. Voen.Znan. 31 [i.e. 32] no.4:26 Ap '56.  
(MLRA 9:8)

(Pistols)

VASENKO, Ye. N.; GATAIA, Ye. Ye.; ZAKUTSKAYA, M. P.; KLAYUROVA, V. F.;  
SHMONOV, O. V.

Vapor pressure and boiling point of a ternary mixture of acetic  
anhydride, acetic acid, and water. Dokl. LPI 5 no. 1/2:161-  
164 '63. (MIRA 17:6)

VASENKO, Ye.N.; GATALA, Ye. Is.; ZAKUTSKAYA, M.P.; LEVASHEVA, V.L.;  
KHAYDUROVA, V.F.; SHOMOGUN, O.V.

Liquid-vapor equilibrium in the ternary system acetic anhydride -  
acetic acid - acetaldehyde. Dokl. LPI 5 no. 1/2:172-175 '63.  
(MIRA 17:6)

ORLINA, M.M.; OVSYANNIKOV, A.I.; KHAYDUROVA, V.S. (Kiybyshev-obl.)

Liver function in atherosclerosis. Kaz. med. zhur. no.6:85 H-D '60.  
(MIRA 13:12)

(LIVER)

(ARTERIOSCLEROSIS)



KHAYDUSHKI, I.T., dotsent; ZAFIROV, P.V., inzh.

Stereoscopic method of establishing the final base in working on  
universal cartographic instruments. Izv.vys.ucheb.zav.; geod.1  
aerof. no.4:143-145 '62. (MIRA 16:2)

1. Sofiyskiy inzhenerno-stroitel'nyy institut, Bolgarskaya  
Narodnaya Respublika.  
(Cartography—Equipment and supplies)

KHAYDUSHKI, I.T., dotsent; ZAFIROV, P.V., inzh.

Factors determining the most appropriate scale of aerial photographs for large-scale mapping by universal methods. Izv.vys. ucheb.zav.; geod.i aerof. no.4:133-142 '62. (MIRA 16:2)

1. Sofiyskiy inzhenerno-stroitel'nyy institut, Bolgarskaya Narodnaya Respublika.

(Aerial photogrammetry)

KHAYDUTOV, I.

(11)

12. "The Russian between the Spies and the Russian Government of the Russian Revolution," A. C. Fiedin (in Russian and Russian summary) pp 271-275.
13. "Notes on the Russian and the Russian Revolution," A. C. Fiedin (in Russian and Russian summary) pp 271-275.
14. "Notes on the Russian and the Russian Revolution," A. C. Fiedin (in Russian and Russian summary) pp 271-275.
15. "Notes on the Russian and the Russian Revolution," A. C. Fiedin (in Russian and Russian summary) pp 271-275.
16. "Notes on the Russian and the Russian Revolution," A. C. Fiedin (in Russian and Russian summary) pp 271-275.
17. "Notes on the Russian and the Russian Revolution," A. C. Fiedin (in Russian and Russian summary) pp 271-275.
18. "Notes on the Russian and the Russian Revolution," A. C. Fiedin (in Russian and Russian summary) pp 271-275.
19. "Notes on the Russian and the Russian Revolution," A. C. Fiedin (in Russian and Russian summary) pp 271-275.
20. "Notes on the Russian and the Russian Revolution," A. C. Fiedin (in Russian and Russian summary) pp 271-275.
21. "Notes on the Russian and the Russian Revolution," A. C. Fiedin (in Russian and Russian summary) pp 271-275.
22. "Notes on the Russian and the Russian Revolution," A. C. Fiedin (in Russian and Russian summary) pp 271-275.
23. "Notes on the Russian and the Russian Revolution," A. C. Fiedin (in Russian and Russian summary) pp 271-275.

247160  
189200

S/126/62/013/002/014/019  
EO39/E135

AUTHORS: Arbuzov, M.P., and Khayenko, B.V.

TITLE: A study of the orientation of the low temperature phase carbide  $Fe_xC$

PERIODICAL: Fizika metallov i metallovedeniye, v.13, no.2, 1962, 294-299

TEXT: It is well known that when hardened carbon steel is annealed two carbides develop; the low temperature carbide  $Fe_xC$  and a carbide with a rhombic lattice, cementite. It has been shown that the low temperature carbide has a tightly packed hexagonal lattice. While the orientation of cementite has been sufficiently well studied experimentally and theoretically, the orientation of the low temperature carbide phase has not been determined experimentally. Previous work on the subject is of a qualitative nature. In this work the orientation of the low temperature carbide has been carried out by a method which involves the construction of polar diagrams from X-ray diffraction measurements. These measurements were made on hardened single

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f

A study of the orientation of the ... S/126/62/013/002/014/019  
E039/E135

crystals of austenite which were subsequently annealed. The materials chosen for investigation were carbon steels, Y-15 (U-15) (1.5% C) and Y-10 (U-10) (1.1% C). For the analysis monochromatic radiation  $\text{CoK}\alpha$  was used. The samples were cut in the form of cylinders (0.8 mm in diameter) so that the (001) direction coincided with the axis of rotation. Further measurements were obtained using a spherical sample (1.5 mm diameter) which could be rotated by means of a goniometer so that a more precise orientation of the crystallographic direction could be obtained; hence enabling a more accurate polar diagram to be constructed. Diffraction patterns were obtained at intervals of  $4^\circ$  over a total angle of  $90^\circ$ . Such a series of measurements allowed the construction of a polar diagram of the crystal faces of the low temperature carbide in relation to the austenite lattice. It is shown that the polar diagrams for the steels U-10 and U-15 are the same, but the intensity of the reflections is greater for the U-15 steel. There are 4 figures.

ASSOCIATION: Kiyevskiy institut GVF (Kiev Institute GVF)

Card 2/2 SUBMITTED: June 13, 1961

The sizes and shapes of the monocrystals are determined by the magnitude of the lattice deformation during cooling.

1. TESTS, PERFORMED: 1.000  
2. TESTS, AN UNKNO:

S/020/62/143/003/014/029  
B104/B102

AUTHORS: Arbuzov, M. P., and Khayenko, B. V.

TITLE: Crystal structure and orientation of the carbide phase of low-tempered steel

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 143, no. 3, 1962, 574 - 577

TEXT: The structure of the carbide phases of steels (1.1 and 1.5% C) after hardening and after annealing of steel in austenitic state was investigated by X-ray diffraction. When steel with 1.5% C was annealed below 200°C a considerable number of intensive lines of the low-temperature carbide phase were observed. The angles of the lines remained constant at different annealing temperatures and times. The same was observed in steel with 1.1% C, the intensity of the X-ray lines was, however, considerably weaker. An analysis of the angles of the lines showed that the  $Fe_xC$  carbide phase had a hexagonal lattice with the constants  $a = 2.73$  and  $c = 4.33$  Å. Two possibilities were obtained for the orientations of low-temperature carbide with respect to the initial phase (austenite);

Card 1/3

Crystal structure and ...

S/020/62/143/003/014/029  
B104/B102

$$\text{I. } \begin{cases} (001)_{\text{Fe}_3\text{C}} \parallel (111)_{\gamma} \\ [(100)_{\text{Fe}_3\text{C}} \parallel (101)_{\gamma}] \end{cases} \quad \text{II. } \begin{cases} (001)_{\text{Fe}_3\text{C}} \parallel (885)_{\gamma} \\ [(100)_{\text{Fe}_3\text{C}} \parallel (153)_{\gamma}] \end{cases}$$

A comparison with the results obtained by G. V. Kurdymov (Vestn. metallo-prom., no. 9, 20(1932)) gives

$$\text{III. } \begin{cases} (011)_{\text{M}} \parallel (111)_{\gamma} \\ [(1\bar{1}1)_{\text{M}} \parallel (101)_{\gamma}] \end{cases}$$

for the orientation of martensite relative to austenite. Relative to austenite  $\text{Fe}_3\text{C}$  is oriented in two ways only: Ia which has been mentioned and

$$\text{II a. } \begin{cases} (001)_{\text{Fe}_3\text{C}} \parallel (101)_{\text{M}} \\ [(100)_{\text{Fe}_3\text{C}} \parallel (111)_{\text{M}}] \end{cases}$$

On annealing in the range 200 - 400°C two carbide phases were observed: low-temperature carbide and cementite. Above 400°C only cementite is observed. There are 2 figures and 11 references: 9 Soviet and 2 non-Soviet. The reference to the English-language publication reads as follows: K. H. Jack, Iron and Steel Inst., 169, 26 (1951).

ASSOCIATION: Kiyevskiy institut Grazhdanskogo vozdushnogo flota (Kiyev  
Institute of the Civil Air Fleet)

Card 2/3



Crystal structure and ...

S/020/62/143/003/014/029  
B104/E102

PRESENTED: July 12, 1961, by G. V. Kurdyumov, Academician

SUBMITTED: July 10, 1961

Card 3/3

S/126/62/013/005/007/031  
E111/E435

AUTHORS: Arbuzov, M.P., Khayenko, B.V.

TITLE: X-ray diffraction study of the crystal structure of  
the carbide phase at different stages in the tempering  
of steel

PERIODICAL: Fizika metallov i metallovedeniye, v.13, no.5, 1962,  
686-692 + 1 plate

TEXT: In spite of considerable efforts by various investigators using X-ray and electron diffraction and magnetic methods, the crystal structure of low-temperature carbon in tempered steel is not firmly established and the existence of an intermediate carbide with a Curie point of 260 to 270°C has not been structurally demonstrated. Therefore, further X-ray investigations of tempering were carried out in the range 100 to 680°C on carbon steels with 1.5 and 1.1% C, types У15 (U15) and У10 (U10) respectively. "Single crystals" of austenite were used, prepared by slow cooling of an ingot in the gamma-range, followed by quenching and cold treatment. Cylindrical specimens  
Card 1/2

X-ray diffraction study ...

S/126/62/013/005/007/031  
E111/E435

were made such that their axes coincided with the  $[001]_{\gamma}$  direction. Monochromatic radiation was used for the X-ray work. With tempering temperatures below  $200^{\circ}\text{C}$ , a low-temperature carbide phase (the carbide  $\text{Fe}_x\text{C}$  or  $\epsilon$ -carbide) is formed with a hexagonal close-packed lattice. Tempering at  $200$  to  $400^{\circ}\text{C}$  leads to the formation of two carbide phases: a low-temperature hexagonal close-packed carbide and a carbide with the rhombic lattice of cementite; with tempering over  $400^{\circ}\text{C}$  only cementite is present. No intermediate carbide ( $\chi$ -carbide) was detected in the steel. The results agree with those obtained previously by one of the authors (M.P. Arbuzov, DAN SSSR, v.73, no.1, 1950) by electrolytic separation of the carbide phase from tempered steel; it is evident that a phase with the rhombic cementite lattice was then isolated and that all the conclusions then drawn about changes in the state of cementite during steel tempering remain valid. There are 1 figure and 2 tables.

ASSOCIATION: Kiyevskiy institut GVF (Kiyev Institute GVF)

SUBMITTED: June 17, 1961

Card 2/2

ARBUZOV, M.P.; KHAYENKO, B.V.

Crystalline structure and orientation of the carbide phase  
of low-tempered steel. Dokl. AN SSSR 143 no.3:574-577 Mr '62.  
(MIRA 15:3)

1. Kiyevskiy institut Grazhdanskogo vozdušnogo flota. Predstavleno  
akademikom G.V.Kurdyumovym.  
(Steel—Metallurgy)

ARBUZOV, M.P.; KHAYENKO, B.V.

X-ray study of the crystal structure of the carbide phase in various stages of steel tempering. Fiz. met. i metalloved. 13 no.5:686-692 My '62. (MIRA 15:6)

1. Kiyevskiy institut Grazhdanskogo vozdushnogo flota.  
(Steel--Metallography)  
(Phase rule and equilibrium)

ARBUZOV, M.P.; KHAYENKO, B.V.

Studying the orientation of the low-temperature carbide phase  
Fe<sub>3</sub>C. Fiz. met. i metalloved. 13 no.2:294-299 F '62.

(MIRA 15:3)

1. Kiyevskiy institut Grazhdanskogo vozdushnogo flota.  
(Iron carbide) (Steel--Metallography)

ARBUZCV, M.P.; PAVLYUKOV, A.A.; KHAYENKO, B.V.

X-ray study of structural transformations during the aging of the  
Anco-4 alloy. Part 1: Modulated structure. Fiz. met. i metalloved.  
19 no.3:462-465 Mr '65. (MIRA 18:4)

1. Institut problem materialovedeniya AN UkrSSR.

ARBUZOV, M.P.; PAVLYUKOV, A.A.; KHAYENKO, B.V.

X-ray study of structural transformations during the aging of the "anko-4" alloy. Part 2: Effects of anomalous scattering caused by the initial stages of the decomposition of solid solutions. Fiz. met. i metalloved. 19 no.4:530-535 Ap '65.  
(MIRA 18:5)

1. Institut problem materialovedeniya AN UkrSSR.



ARBUZOV, M.P.; KHAYENKO, B.V.

Studying the size of mosaic blocks and the microdistortions of the  
Fe<sub>x</sub>C carbide in low-tempered steel. Fiz. met. i metalloved. 18  
no.2:283-287 Ag '64. (MIRA 18:8)

1. Institut metallokeramiki i spetsstlavov AN UkrSSR.

ARBUZOV, M.P.; PAVLYUKOV, A.A.; KHAYENKO, B.V.

X-ray study of structural transformations during the aging of the ANCO-4 alloy. Part 3: State and crystal phase structure formed during the aging of the ANCO-4 alloy. Fiz. met. i metalloved. 20 no.1:33-37 J1 '65.

(MIRA 18:11)

1. Institut problem materialovedeniya AN UkrSSR.

L 33111-66 ENT(m)/ENP(t)/ETI IJP(c) JD  
ACC NR: KP6024084 SOURCE CODE: UR/0226/66/000/004/0074/0078

AUTHOR: Arbuzov, M. P.; Khayenko, B. V. 64

ORG: Institute of Problems in Materials Science, AN UkrSSR, (Institut problem materialovedeniya AN UkrSSR) B

TITLE: Radiographic investigation of the distribution of electron density in titanium carbide

SOURCE: 27 21 Poroshkovaya metallurgiya, no. 4, 1966, 74-78

TOPIC TAGS: radiography, electron density, carbide, titanium compound, chemical bonding, negative ion, positive ion

ABSTRACT: The authors use the data in the literature for determining the distribution of electron density in titanium carbide. It is found that there are several types of composite bonding between the atoms in this compound. The titanium atoms are positively ionized with a charge of +4, while the carbon atoms are negatively charged. The composite bonding between neighboring titanium and carbon atoms has an ionic component. Metallic bonding is most probable between titanium atoms. Orig. art. has: 3 figures, 3 formulas, and 1 table. [JPRS]

SUB CODE: 20, 14, 11 / SUBM DATE: 19Oct65 / ORIG REF: 003 / OTH REF: 002

Card 1/1

0915

1648

ACC NR: APPROVED FOR RELEASE: 09/17/2001 SOURCE CODE: CIA-RDP86-00513R000721920004-6

AUTHORS: Arbuzov, M. P.; Kachkovskaya, E. T.; Khayenko, B. V.

ORG: Institute for Materials Problems, AN UkrSSR (Institut problem materialovedeniya AN UkrSSR)

TITLE: X-ray investigation of the structure of the compound  $Ni_3Al$  alloyed with Ti, Cr, and W 27 21 ✓

SOURCE: Fizika metallov i metallovedeniye, v. 21, no. 6, 1966, 854-857

TOPIC TAGS: nickel alloy, aluminum alloy, titanium containing alloy, chromium containing alloy, tungsten containing alloy, x ray diffraction study

ABSTRACT: The structures of pure  $Ni_3Al$  and that of  $Ni_3Al$  alloyed with Ti, Cr, and W respectively were investigated by x-ray analysis. The investigation supplements the results of M. P. Arbuzov and I. A. Zelenkov (FMM, 1963, 15, 725). The following intensity relationship was used

$$I = ALPF^2$$

where I is the reflected intensity, A - proportionality coefficient,  $L = \frac{1 + \cos^2 2\theta}{\sin^2 \theta \cos \theta}$ , P - periodicity factor, and F - structure factor for the given reflection given by

$$F = CF_r \exp \left[ -B \left( \frac{\sin \theta}{\lambda} \right)^2 \right]$$

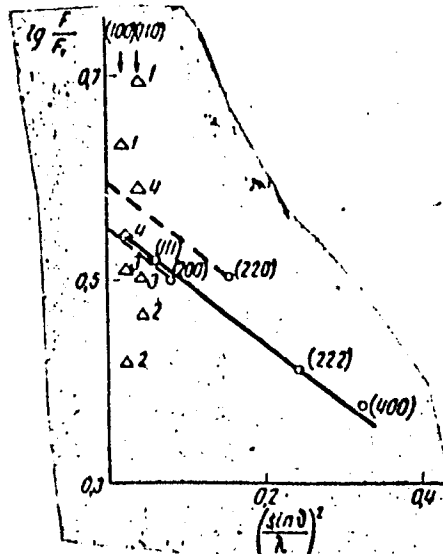
Card 1/3

UDC: 548.4

ACC NR: AP6018943

Here B and C are constants, and  $F_T$  is calculated either after R. E. Watson and A. J. Freeman (Acta cryst., 1961, 14, 27), or after L. H. Thomas and K. Umeda (J. Chem. Phys., 1957, 26, 293) and N. F. Kravtsova and V. P. Tavetkov (Ukr. fiz. zhurnal, 1962, 7, 1355). The experimental results are presented in graphs and tables (see Fig. 1).

Fig. 1. Distribution of calculated points of superstructural reflections (100) and (110) for  $Ni_3Al$ , alloyed with W (alloy 4), according to different structural types of W atoms distributions. 1 -  $Ni_3(AlW)$ ; 2 -  $(NiW)_3(AlNi)$ ; 3 - statistical average distribution of W atoms; 4 -  $1/3$  of W atoms in Ni sublattice and  $2/3$  in Al sublattice.



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